

Preliminary Report on a Site at Sham Wan, Lamma Island, Hong Kong

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INTRODUCTION

SHAM WAN (深灣, "deep bay" in Chinese) is situated on the southern, sparsely inhabited half of Lamma Island (Fig. 1). Evidence of prehistoric activity on this site was first reported by William Meacham in March 1971. Although there were no surface finds, several small test pits yielded prehistoric material, and the concentration of artifacts at 60 cm and below indicated an undisturbed cultural deposit. In May 1971, three trial pits were excavated by the Hong Kong Archaeological Society. A geological investigation and a survey of the site were carried out by C. L. So, T. N. Chiu, and students from the Department of Geology and Geography at Hong Kong University, and a full-scale excavation was undertaken in November and December of that year. As the excavation proceeded, it became apparent that a sequence of prehistoric and protohistoric cultures was observable at this site, and that there was regular habitation or activity in the area from recent times back as far as perhaps 6000 years.

DESCRIPTION OF SITE

The cultural remains occur in a flat, elevated sandbar connecting a large headland to the rest of the island north-south in tombolo fashion, with a valley to the east (Pl. I). The bar was probably formed as a 6 m sea terrace, and the valley would then have been a lagoon or tidal marsh. The present bay faces south, providing good anchorage and shelter from the prevailing easterlies. The beach area is further sheltered within the bay and is not visible from the open sea. This general geogra-

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phical setting is typical for early settlements in Hong Kong, virtually all neolithic remains being found in such raised beaches.

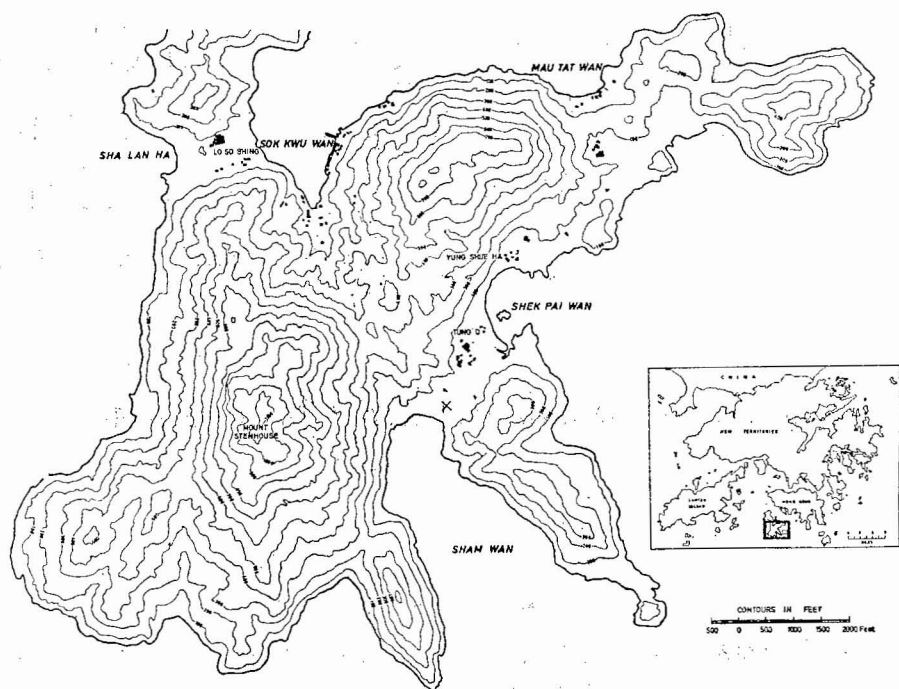


Fig. 1 Map showing Sham Wan in relation to Hong Kong.

The main geological feature of the surrounding hillslopes is gray, medium-grained granite, which occurs as boulder outcrops or coastal platforms. There are occasional dykes of quartz porphyry, which is a fine-grained, workable stone. Vegetation is slight and erosion is in evidence on both slopes, though more to the north. A modern beach fringes the raised beach to the west, and the valley to the east is swampy and only 2.3 m above sea level. There are in the area several intermittent springs which probably flowed year-round when the water table was higher.

The sandbar itself is approximately 120 m \times 40 m, and 7.4 m above sea level. The flat top of the bar, and the slope toward the valley, show signs of cultivation in recent years, while there is a thick shrub cover on the slope separating the present beach from the bar. A layer of topsoil 10 to 15 cm in depth covers the surface, overlying an "organic layer" of sand and humus which extends to 100 or 110 cm. The next layer is of sandy subsoil, which continues to a depth of approximately 280 to 320 cm, where a change commences to sandy clay. At 480 cm, the lowest point reached during this excavation, the clay content was high, and the soil was very tightly packed.

EXCAVATION

The area selected for intensive excavation was the southwest quadrant of the raised beach area (Pl. I). At the completion of the test squares, a 10 m \times 6 m grid was surveyed, and 2 m squares were dug to a depth of 1 m, then combined into a



Plate I *top*, aerial view of site, facing southeast; *middle*, excavation in progress. Sir Murray MacLehose, Governor of Hong Kong (third from left at top) and W. G. Solheim (center left) visiting site; *bottom*, large pit at 3 meters.

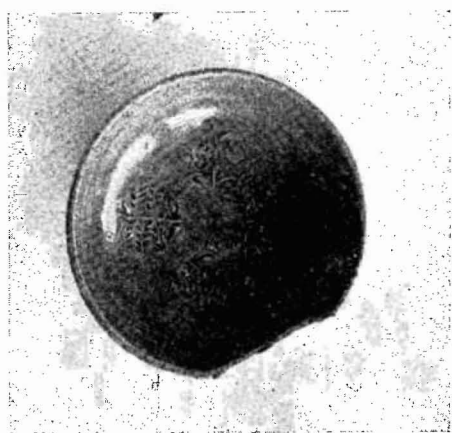
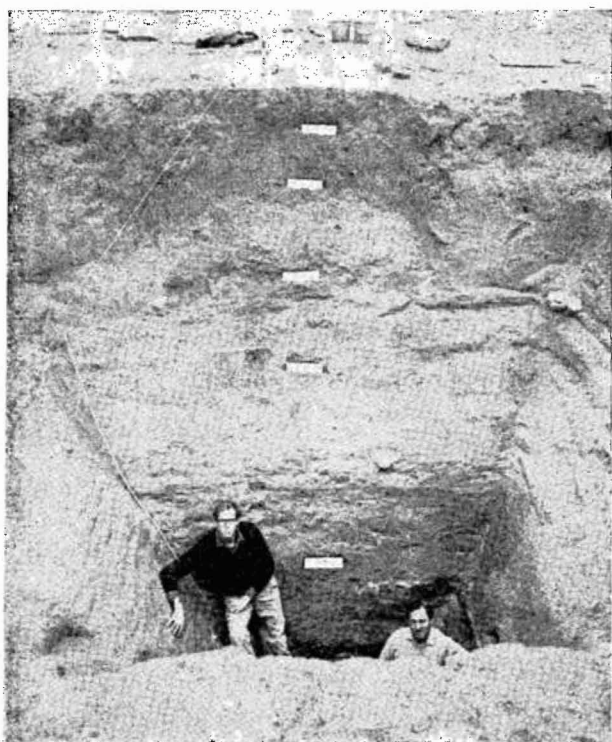


Plate II *top*, authors in "grid" at 4 m 50, markers at each cultural level; *bottom left*, covering bowl; *bottom right*, Six Dynasties "Kuan" jar.

5 m and a 6 m square, which were continued to a depth of 480 cm at the lowest point. The total area excavated was as follows:

DEPTH	AREA
1 m	80 sq. m
2 m	30 sq. m
3 m	15 sq. m

The cultural deposit extended from the surface to a depth of 330 cm, with very little evidence of disturbance, presenting what appears to be a complete cultural sequence not observed previously at any site in Hong Kong. When the first signs of this sequence were recognized, it was suggested by Bard that pottery styles be used as the main cultural markers. This method proved especially applicable, since there were no "occupational" layers, and the soil stratigraphy was not correlative with the cultural changes.

FINDS

Using pottery as the main cultural indicator, we established five levels:

LEVEL	DEPTH (CM)	POTTERY	TOOLS	DATES?
I	0-40	modern	iron	A.D. 400-present
II	40-80	hard geometric	bronze	400 B.C.-A.D. 400
III	80-130	soft geometric	polished stone	1500-400 B.C.
IV	130-250	incised	polished stone	2500-1500 B.C.
V	250-330	corded	?	?-2500 B.C.

It should be noted that the foregoing description of each level is based on its most advanced trait; thus, corded pottery is found in levels II, III, IV as well as V; soft geometric in levels II and III; and polished stone also in level II. The dates given above are based on the traditionally accepted phases of South China prehistory (Fig. 2).

Level I

The recent historical past is represented by the first 40 cm, which yielded glazed and porcelainous sherds, iron fragments, and coins of various eras. The coins were in especially good stratigraphic sequence, with a nineteenth century British coin and Ching dynasty (1644-1911) coins in the first 20 cm, a Tang dynasty (618-907) coin at 25 cm, and "wu chu" coins (五銖, circulated ca. 110 B.C.-A.D. 600 from 40 to 80 cm.

Consistent with this sequence were two Six Dynasties (A.D. 386-556) "Kuan" shaped jars (Pl. II) at 75 cm, which, judging from the surrounding stratigraphy, were most likely buried from about 40 cm. They were probably intended as a burial offering, as both jars were up against a stone slab, and one contained small animal bones. The body of the jars is of a buff-colored, porous clay with an uneven greenish-yellow glaze that has peeled off in places. The glaze inside the two bowls covering the jars is better preserved, revealing an underglaze incised design.

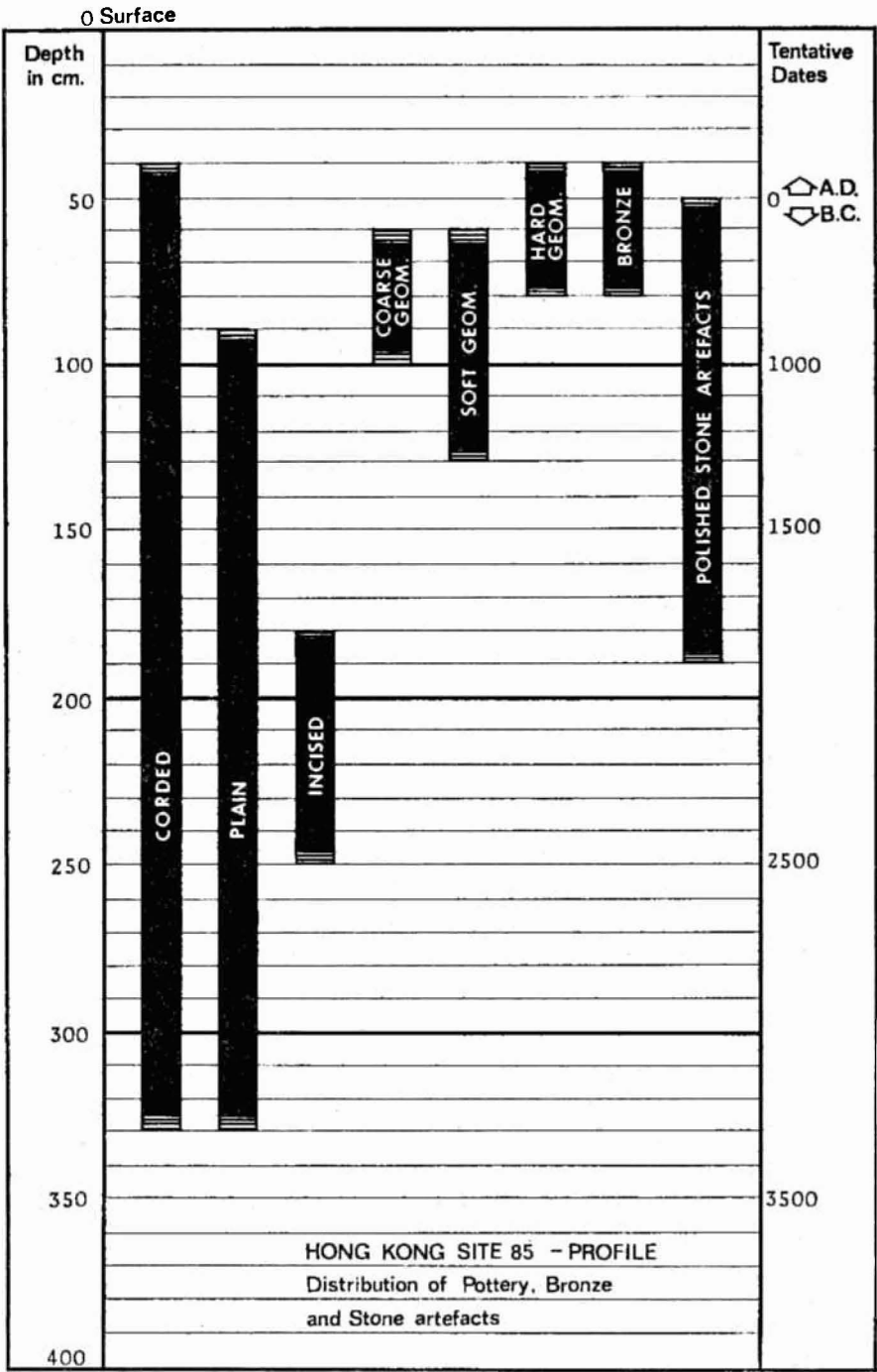


Fig. 2 Duration of pottery types and tool industries. (Courtesy, *Journal of the Hong Kong Archaeological Society*, vol. III, 1972.)

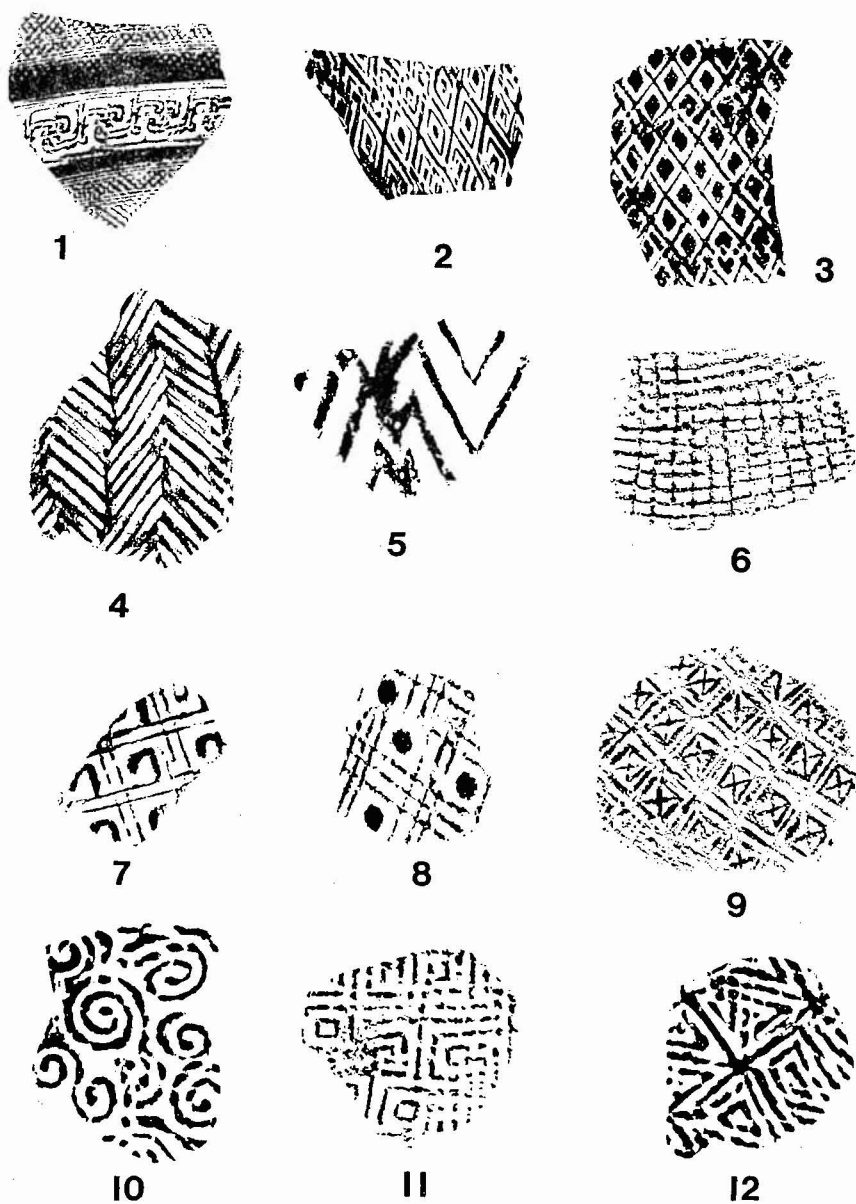


Fig. 3 Rubbings from stamped geometric pottery, levels II and III:

- | | |
|------------------------|---|
| 1 double-F on fine net | 7 and 8 "studs-in-lattice" or "thunder" |
| 2 and 3 lozenge | 9 "Union Jack" |
| 4 herringbone | 10 spirals |
| 5 chevron | 11 squares |
| 6 medium net | 12 triangles |

(1, 2, 3, 6, and 9 on hard pottery; 2-10 on soft; 5, 10, 11, 12 on coarse)

Level II

This Bronze Age level was the most productive of artifacts, the amount of bronze being, however, rather small. Similarly lacking in quantity was the so-called hard geometric stamped pottery, a high quality ware well-known in South China as a late neolithic-chalcolithic phenomenon. More prevalent was the "soft geometric," low-fired, fine-textured stamped pottery usually buff gray in color, as well as coarse, sand-tempered sherds with either geometric or corded design. The geometric decoration was characterized by designs said to be derived from Chou dynasty (1121-255 B.C.) bronze motifs, especially the "double-F" (夔, "Kuei") design (Fig. 3), which was stamped on a few sherds over the net pattern. Patterns on coarse and soft pottery included chevrons, lozenges, spirals, circles, and studs-in-lattice types.

Bronze was present primarily as small fragments, fishhooks, small projectile points, and two pieces of vessels. Polished stone was in greater abundance, due in part to a cache discovered in unusual circumstances. The implements, finished and unfinished, were strewn about, and on, long obviously shaped rock slabs (Pl. III and Fig. 4), but no evidence of any burial in association was found. The slabs were not long enough to be considered as stone coffins, and from their position seemed to have originally been standing. In view of the findings noted above, the absence

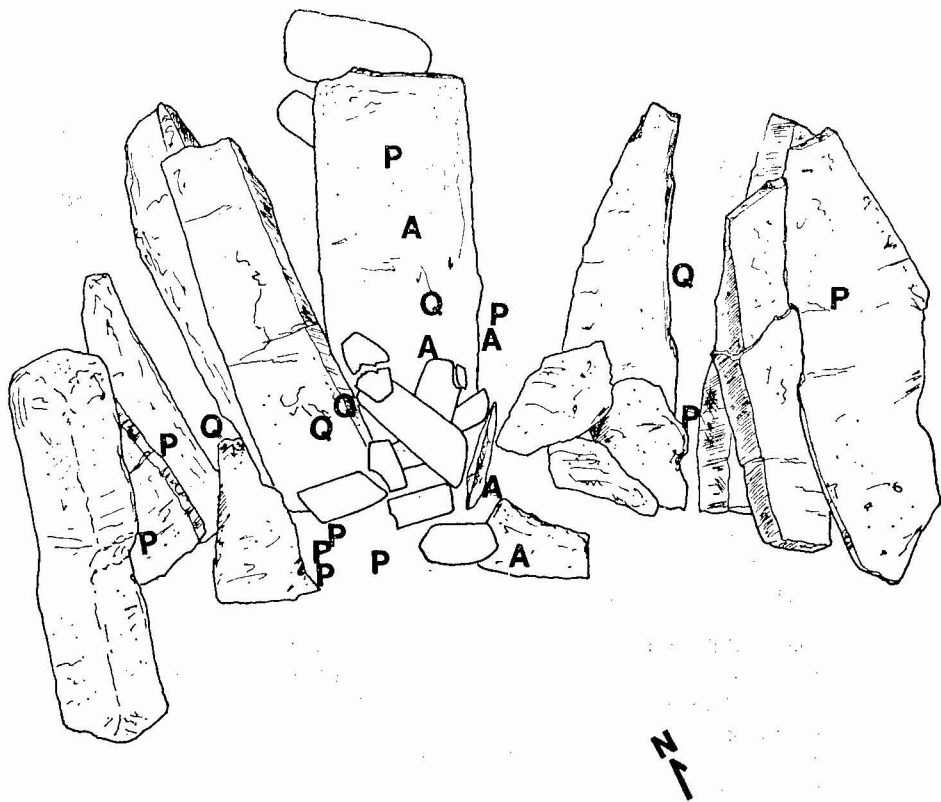


Fig. 4 Sketch of stone cache area in Level II (see Pl. III).
A = adze; P = point; Q = quartz ring or polishing stone.

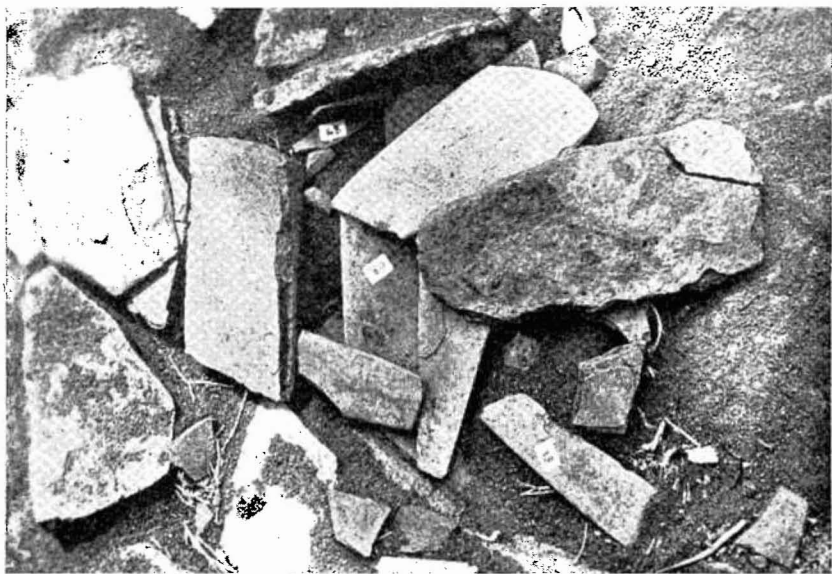


Plate III *top*, general view of stone cache, Level II (facing southeast); *bottom*, close-up of stone cache area in lower right of Pl. III, *top*, with larger stones removed. Area of Plate III, *top*, is 3 m \times 2 m.

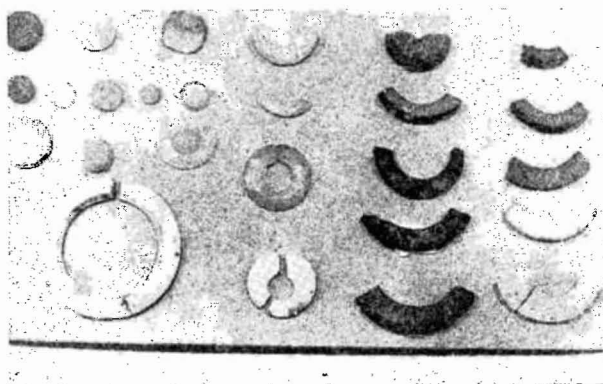
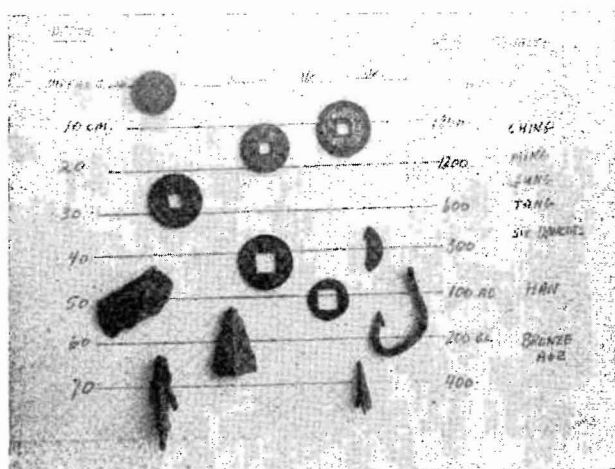


Plate IV *top*, stone artifacts from cache, Level II; *middle*, coins and bronze in stratigraphic positions, levels I and II; *bottom*, stone rings from levels II and IV.

of chips, and the number of complete implements found, it is unlikely that the structure could have been simply a workshop. On the other hand, there were unfinished tools as well, and no bronze or pottery, other than sherds, in immediate association.

The polished stone inventory of this cache includes knives, projectile points, adzes, and both slotted and complete rings, and involves stone material from various parts of Hong Kong, consisting principally of slate and shale for the knives, quartz and dolerite for the rings, and a variety of fine-grained volcanics for the adzes and points (Pl. IV). The end-sharpened knives suggest a relationship with North China, but are quite rare in the South. Most of the points are of the same leaf-shaped style, rhombic in cross-section, and the same size. Most of them show no sign of use, and one of the stone knives was made of granite, a rock quite unsuitable for a cutting tool. The adzes were rectangular to nearly oval in cross-section, and were slightly shouldered (Fig. 5). One adze was obviously too thin and delicate for use.

Other finds from this level included a possible cache of "wu chu" coins; two pottery spindle whorls; teeth of deer, and of pigs, cows, and other domestic animals; and a number of crude stone "picks," possibly used for opening oysters, or as hoes.

Level III

From 80 to 130 cm there was a marked decrease in artifacts, indicating a relatively uninhabited phase or a shift in the area of activity on the site. Geometric pottery continues, but only in the "soft" variety, and below 100 cm it is rare. There is a corresponding reduction in the variety of patterns, with only chevrons, net, and studs-in-lattice in evidence. However, due to the paucity of geometric sherds, one cannot assume that these styles represent the earlier types. A new element not seen in Level II is the incised "scallop" pattern on cord-marked pottery (Pl. V). In addition, some sherds of soft pottery are of white or "red brick" clay, with no stamped decoration, and fragments of coarse-tempered pot stands and fine-paste foot rims appear, some of them perforated. Interestingly, the proportion of coarse to fine pottery remains constant at this level, as for the other levels, at roughly 4 to 1, based on weight and on surface area.

Level IV

Below 130 cm the pottery is fully "pre-Geometric" in that the only surface decorations are incised patterns or cord-markings. The fine pottery is white or red, white predominating, possibly painted at one time, although only a trace of pigment was found on a single sherd. Some of the sherds, especially the rims, are incised with simple geometric designs (Fig. 6), suggesting an alternative to the origin of the stamped geometric pottery mentioned above. Aside from the scallop design incised on coarse corded pottery, most of the incised ware is fine-textured. An unusual occurrence at this level was a cord-marked pottery of fine paste, a type not previously reported in Hong Kong. Also in the pottery inventory are low foot-rims and large pot-stands occasionally incised or pierced.

This level also yielded what appears to have been at least a "bone repository," although evidence of a burial in the archaeological sense is lacking. Fragmentary

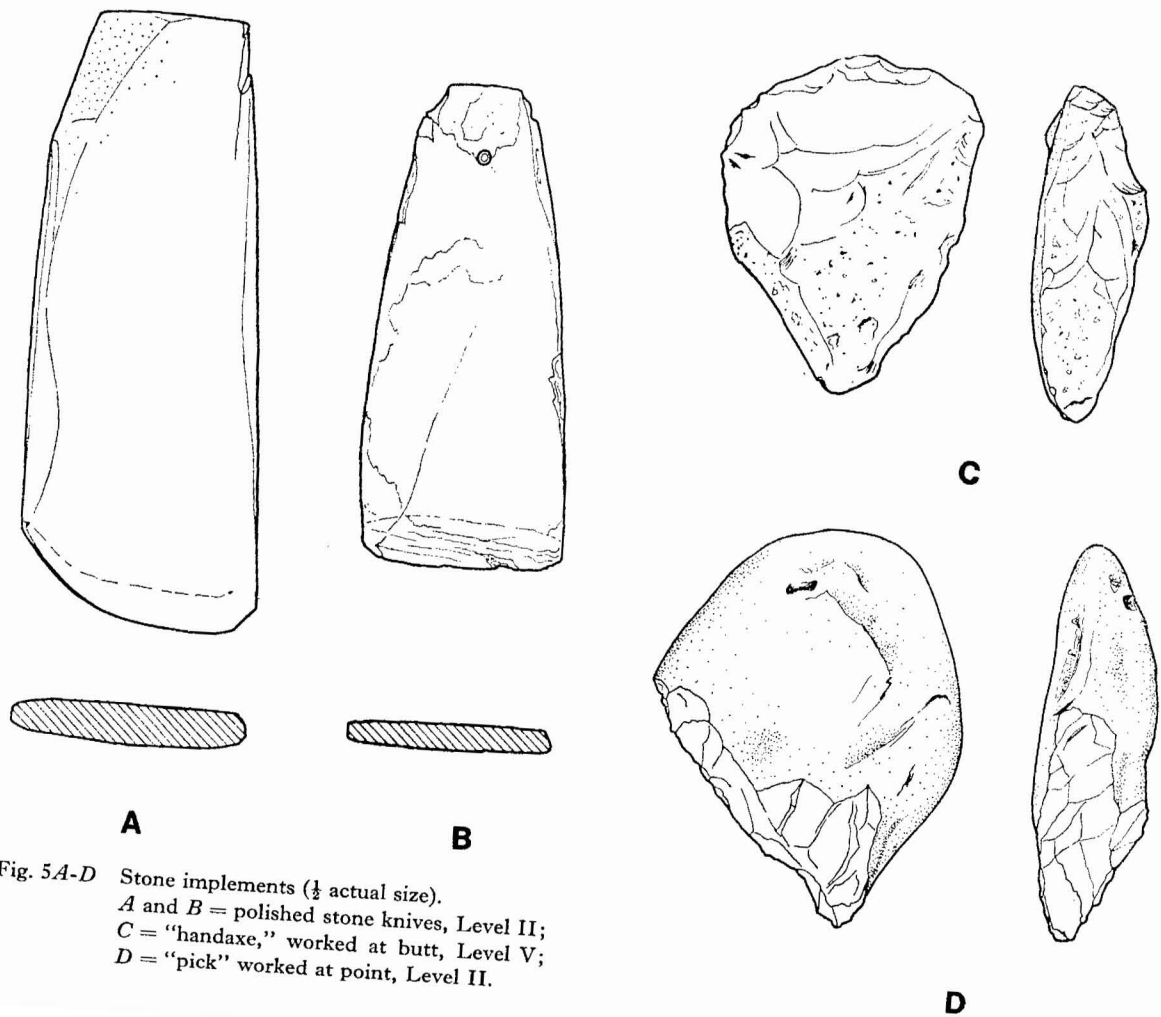


Fig. 5A-D Stone implements ($\frac{1}{3}$ actual size).
 A and B = polished stone knives, Level II;
 C = "handaxe," worked at butt, Level V;
 D = "pick" worked at point, Level II.

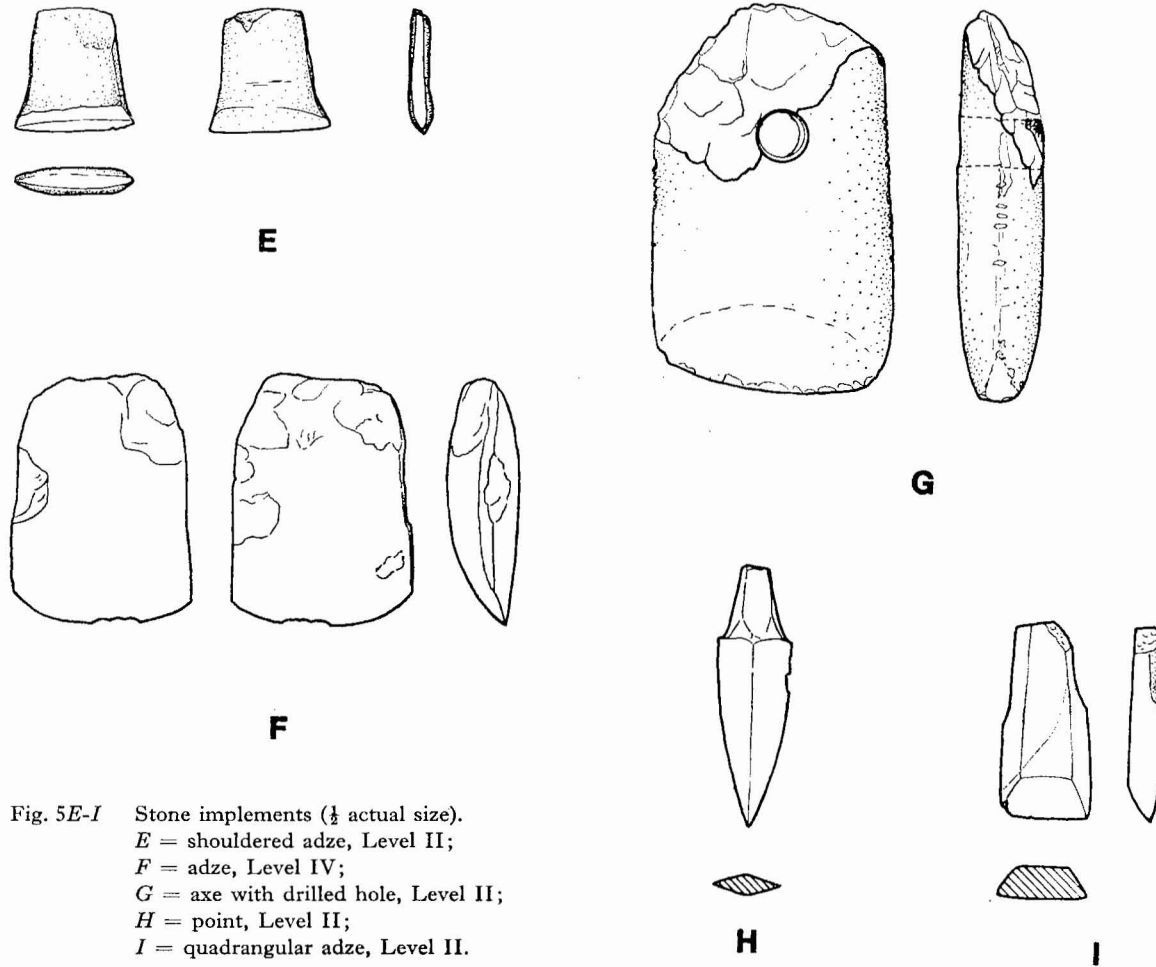


Fig. 5E-I Stone implements ($\frac{1}{2}$ actual size).
 E = shouldered adze, Level II;
 F = adze, Level IV;
 G = axe with drilled hole, Level II;
 H = point, Level II;
 I = quadrangular adze, Level II.

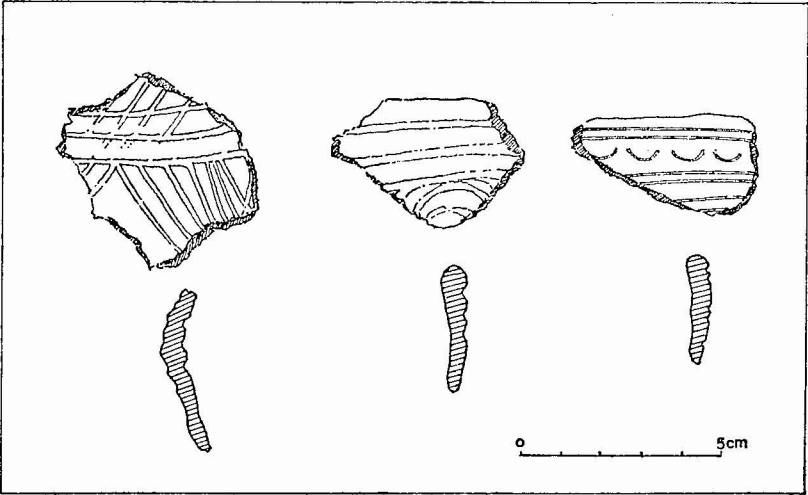
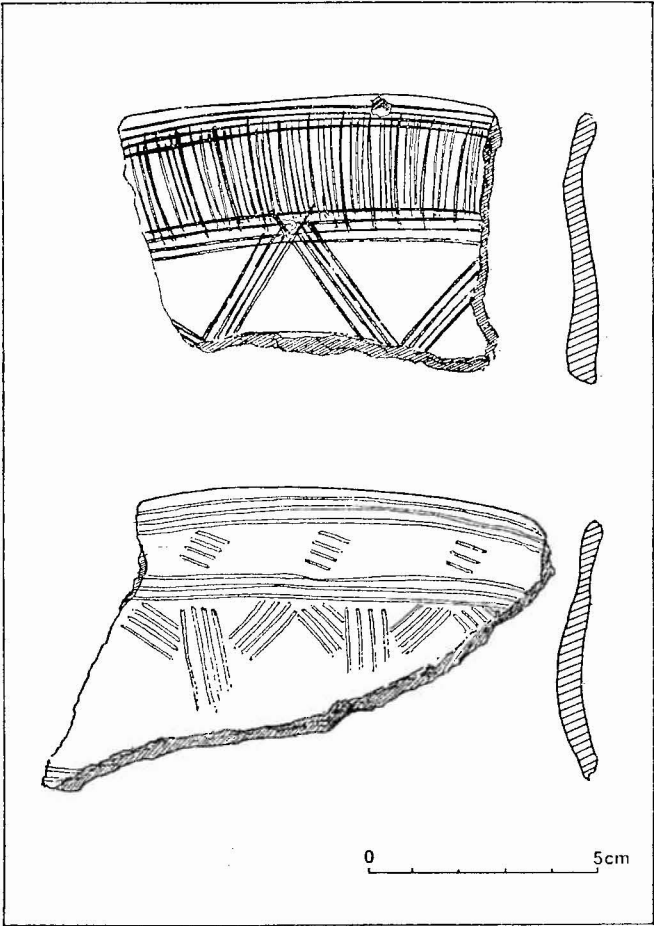


Fig. 6 Sketches of incised patterns on pottery in Level IV.



Plate V *upper left*, pottery from Level IV, corded decoration on outside and incised design on inside of rim; *bottom left*, coarse and fine pottery in context from Level IV; *upper right*, footed dish ("fruit stand") from Level IV; *bottom right*, stone "chopper" and corded pottery, Level IV.

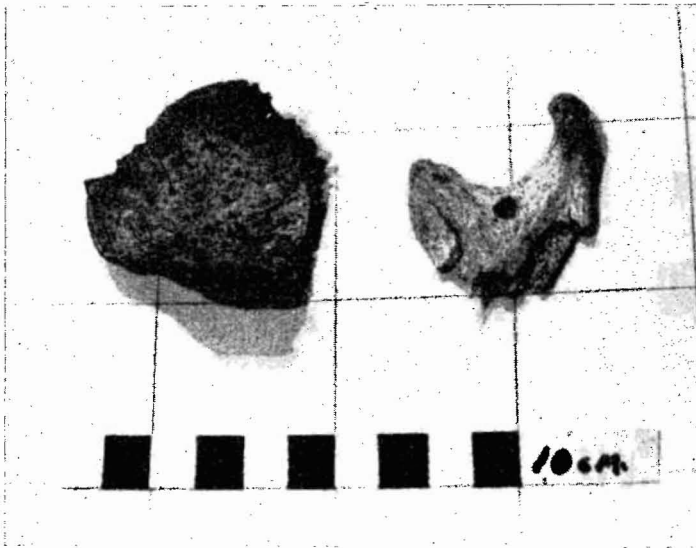


Plate VI *top*, skull (II in Fig. 7) from Level IV; *bottom*, bone fragments showing discoloration and curling (left) and drilling (right).

skeletal remains of 10 to 13 individuals were uncovered, including two skulls approximately fifty percent complete (Pl. VI). Most of the bones were in very friable and fragmentary condition, and no skeletal relationship could be established, with the exception of skull I, which was adjacent to the shaft of a femur (Fig. 7).

The skeletal remains were studied by F. P. Lisowski and students from the Anatomy Department of Hong Kong University. The most striking feature of their report is the evidence of cremation of some of the bones, which were characterized by discoloration, brittleness, cracking, and curling (Pl. VI). Further, several of the fragments had artificially drilled holes, which were bored either after death or a maximum of ten days before. Also noted were signs of malnutrition, although the dental preservation seemed quite good. Upper incisors from the two skulls were shovel-shaped, which is a mongoloid feature. Approximately one-half of the individuals identified were characterized as "young adults."

In proximity to the human bones were two polished adzes, nearly lentoidal in cross-section (Fig. 5); two almost complete corded pots (Pl. V); and several fragments of polished stone rings. The haphazard arrangement of bones and artifacts makes it difficult to report that any burial took place, or that any ceremonial goods were offered. Although the adzes were complete, they were not of the high quality polish of the rings, which were broken. Further, the corded pots, although nearly complete and incised, would still be considered as utility ware, especially in comparison with the more decorative, "ceremonial" pottery, sherds of which are present in this level.

Level V

From the limit of Level IV (250 cm) to the deepest sherd (330 cm), there was noted another decline in the concentration of artifacts. This reduction, coupled with the smaller area excavated, makes it difficult to report and analyze differences between this level and Level IV. Incised pottery is rare, but there persist the fine paste red-and-white and the coarse corded pottery. Some of the sherds have a white slip, others have been burnt black, and the firing and durability of the sherds varies considerably.

In the upper portion of this level a chipped stone implement was unearthed which was unlike the ordinary "pick." This tool, and a fragment of another at 220 cm (Fig. 5), may represent an earlier stone industry than the polished stone tools, but no tools other than those already mentioned were encountered below 200 cm.

CHRONOLOGY

The 330 cm depth of distribution of artifacts at Sham Wan indicates an occupation of or activity on the site for an extended period of time, from the iron and bronze ages to the early neolithic. However, beyond the dynastic periods related to the finds in levels I and II, precise dating is extremely difficult. Samples of pottery have been taken from each level and are being dated by thermoluminescence by the Oxford University Research Laboratory; Carbon-14 samples have been submitted to the National Taiwan University C-14 Unit. The results of these analyses will be of considerable importance, due to the scarcity of absolute dates from South China.

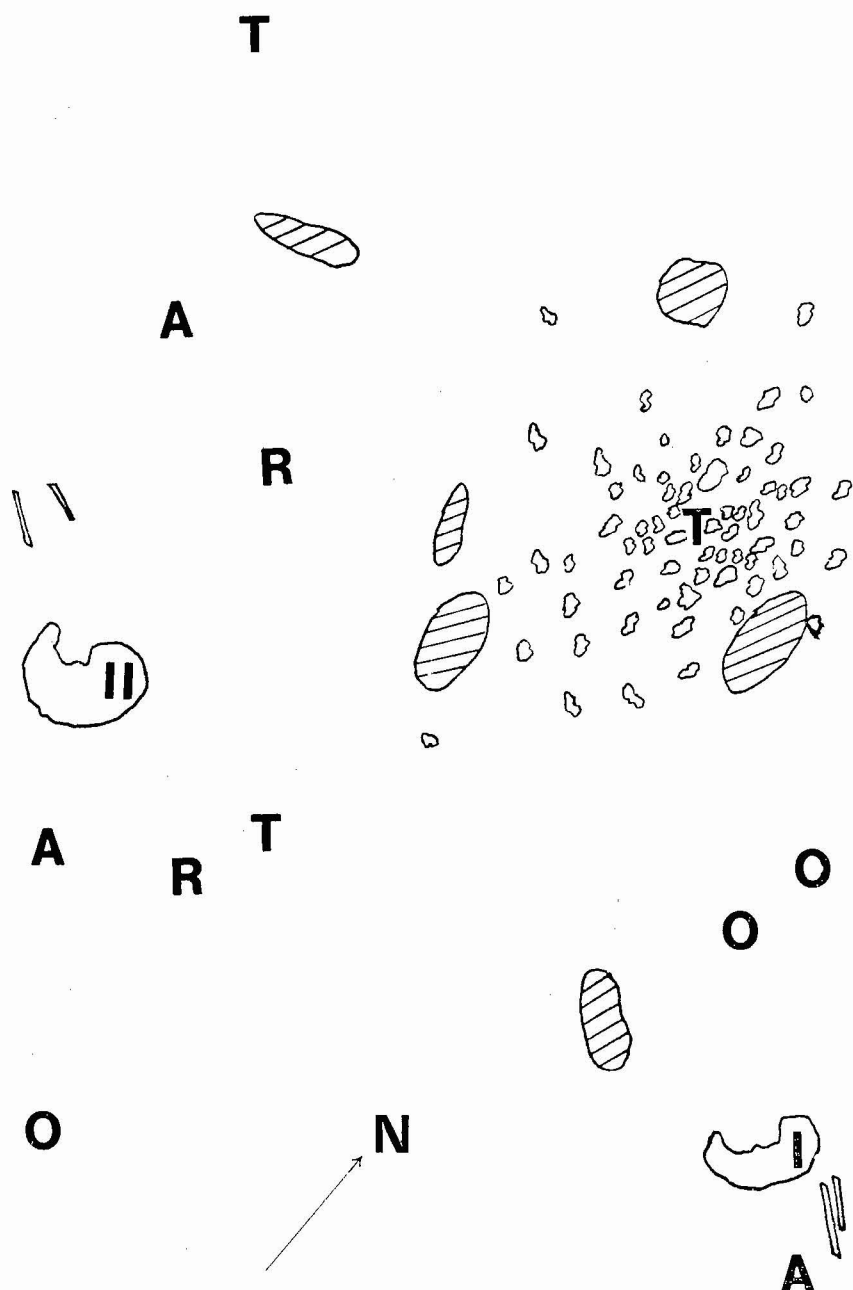


Fig. 7 Sketch showing position of objects from 150–170 cm, Level IV (sherds omitted).

I and II = partial skulls

A = adze

O = nearly complete pots (see Pl. V)

R = ring fragment

T = scattered teeth

○ = skull fragments

▨ = long bones

▨ = large stones

It is relatively clear that 40 cm must be around A.D. 200–400, and this date is substantiated by a C-14 date of A.D. 295 ± 55 (University of Groningen, Holland) from a similar context and depth at Tai Long on Lantau Island. Although the coins do not provide a precise date for the beginning of the bronze age, it is of note that bronze and hard geometric pottery, especially “double-F,” are related at sites in Kwangtung province, and the latter is thought to date from the Warring States period (ca. 480 B.C.) (Liang 1959). Further, K. C. Chang (1963: 248) has postulated a date of ca. 1500 B.C. for the early Geometric Pottery culture, but a precise date for the South China coastal region is not yet established. There is a single C-14 date from Hoifeng, 100 miles north from Hong Kong along the coast, of 1150 B.C. ± 150 , which seems to relate to Level III (Maglioni 1952). Levels IV and V show some similarity to the lower levels at Feng Pi Tou on Taiwan (Chang 1966: 145–146), with an early date of ca. 3500 B.C.

However, one Hong Kong archaeologist, in prewar days, calculated an average rate of sand accumulation for raised beach environments (3 cm = 100 years) (Schofield 1938: 277), and this rate is substantiated by the coins in situ, the C-14 date from Tai Long, and the appearance of geometric pottery. Even assuming an agricultural factor for the last 2000 years, this calculation would give a lower date of ca. 6000 B.C., a possibility not yet to be ruled out.

DISCUSSION

From the relatively small proportion of the beach area thus far excavated, we can do no more than to suggest some inferences for further investigation. However, since the site does seem to mirror the human habitation of Hong Kong, and if the relationship between the pottery levels at Sham Wan and the traditional cultural horizons is correctly assumed, some tentative conclusions can be drawn about the site and the coastal region of Southeast China in macrocosm.

Level II shows clearly that the Chinese influence on the protohistoric culture here was considerable, the key question being to what extent this influence was present before the Han political-military expansion southward from the second century B.C. This site demonstrates the association of bronze with pottery styles *possibly* related to Shang and Chou motifs, an association in evidence at other sites in South China. In this same period, there were survivals from the Neolithic in the form of polished stone tools and corded pottery. This level must certainly correlate with the sites of Man Kok Tsui on Lantau Island (Davis and Tregear 1960) and Tai-wan on Lamma (Finn 1958), although the relative lack of hard geometric in relation to the former, and of bronze in relation to the latter, is unexplained.

Level III does not show such unmistakable Chinese influence, for, as suggested earlier, the geometric designs here present may well have had an independent origin. Likewise, levels IV and V show a limited similarity to certain aspects of the Lungshanoid culture to the north, for example in the “tou” (fruit stand) pottery form, while other characteristics, such as the incised patterns or the pierced pot stands and foot rims, are found both in the southernmost areas of the Lungshanoid (i.e., Fukien and Taiwan) and in Vietnam. Without more data on the pottery it is not possible to establish a link between the Lungshanoid and the *contemporary culture* present at Sham Wan.

The human remains from Level IV are equally (though tantalizingly) indeterminate, as the remains were too fragmentary to give conclusive racial evidence. The "shovel-shaped" incisors, although a mongoloid feature, do not exclude a Southeast Asian or Oceanic link. Further, the Chinese are not known to have practiced cremation in neolithic times. Therefore, the bones may be those of a non-Chinese people originating in this area.

Concerning the economy of the people in question, one assumes from the nature of this site, and others in Hong Kong, that it was heavily dependent on the exploitation of the marine resource. However, no shell middens or significant shell remains were located, nor have there been such findings at any site in Hong Kong. Evidence was discovered of fishing, including remains of a species found at 20 fathoms and below, and of animal husbandry, and of course agriculture must have been known, perhaps in the form of saltwater rice, but the sequence and dates of development must remain matters for speculation.

In summary, Sham Wan has provided us with representation of the full range of cultural traditions hitherto found in Hong Kong. Indeed, it is quite likely that, in the small area thus far excavated, evidence has been identified of three "ceremonial practices" separated by hundreds of years, namely the Six Dynasties jars from Level I, the stone cache in Level II, and the multiple cremation in Level IV. And as there remains a large portion of the beach to investigate, with the aid of an accurate chronology, Sham Wan will surely provide valuable data for the study of the South Chinese Neolithic.

ACKNOWLEDGMENTS

The excavation at Sham Wan would not have been possible without the generous aid of the Hong Kong Government, in the form of financial assistance, transportation arrangements with the Marine Department, and the provision of study and display facilities at City Hall Museum. Mention must also be made of our gratitude to F. P. Lisowski, C. L. So and T. N. Chiu and their students for the research they contributed, to Peter Lam and Bill Kelly for the sketches, and to the seventy-three members of the Archaeological Society, who volunteered of their time and energy to carry the bulk of the work.

REFERENCES

CHANG, KWANG-CHIH

1963 *The Archaeology of Ancient China*. New Haven: Yale University Press.

1966 Preliminary notes on the excavations in Formosa, 1964-65. *AP* 9:140-149.

DAVIS, S. G., and MARY TREGEAR

1960 Man Kok Tsui, Archaeological Site 30, Lantau Island, Hong Kong. *AP* 4:183-212.

FINN, DANIEL J.

1958 *Archaeological Finds on Lamma Island*. Hong Kong: University of Hong Kong Press.

LIANG, CHAO TAO

1959 梁劍韜。東南沿海新石器時代文化的分佈和年代探討。考古, 1959/9. [On the distribution and dating of the Neolithic on the southeast coast. *KK* 9.]

MAGLIONI, FR. RAFAEL

1952 Archaeology in South China. *JEAS* II(1):1-20.

SCHOFIELD, WALTER

1938 A proto-historic site at Shek Pik. *Proceedings of the 3rd Congress of Prehistorians of the Far East*, Singapore, 1938, p. 277.